09/536,159 - 030700

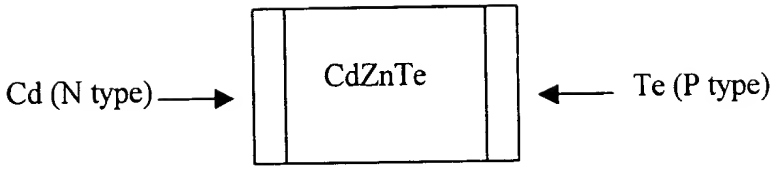

Figure 1

CD/SD/SD" 95/95/50

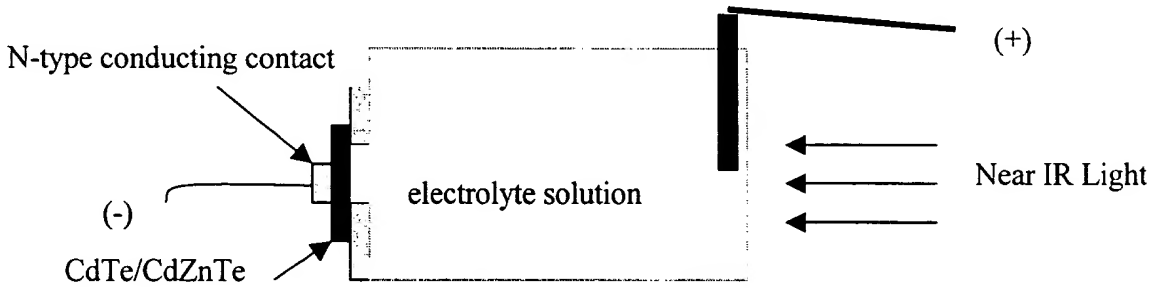

Figure 2

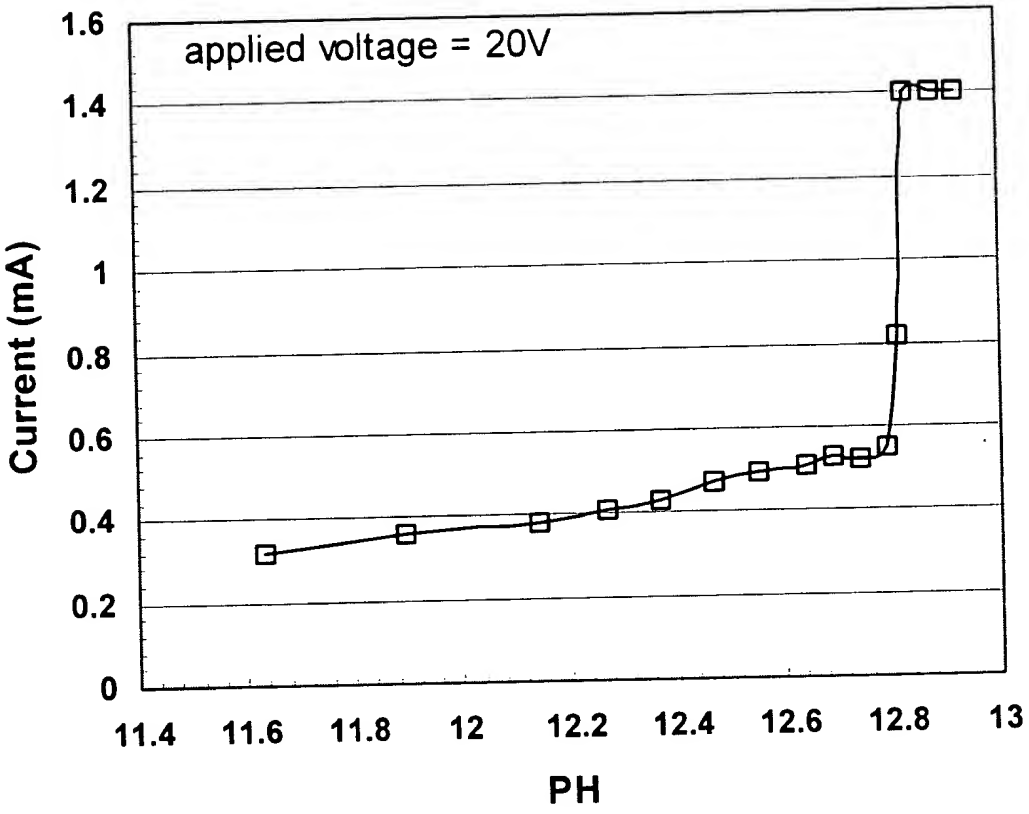
applied voltage = 20V
Current (mA)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
11.4
11.6
11.8
12
12.2
12.4
12.6
12.8
13
PH

Figure 3

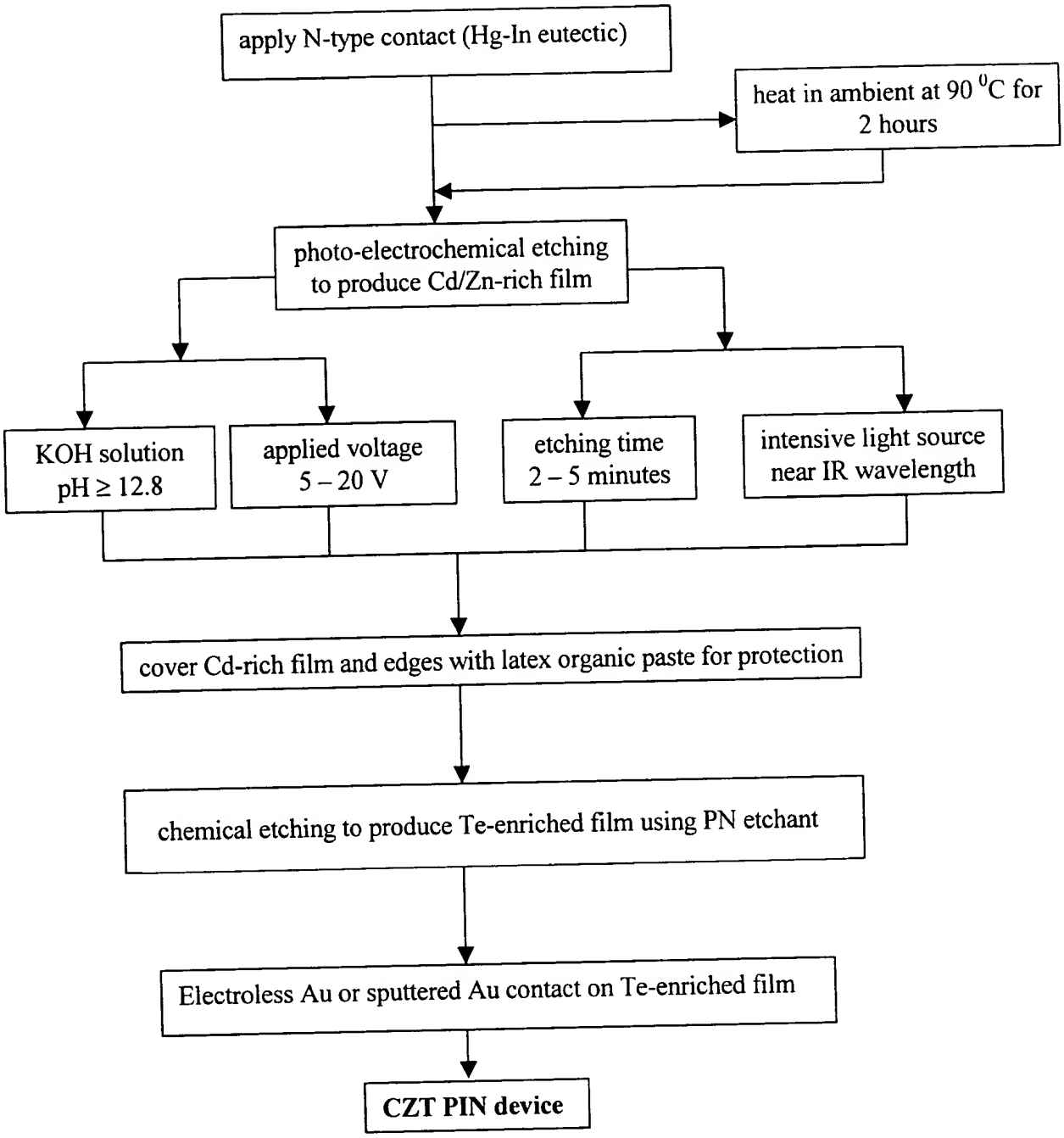
apply N-type contact (Hg-In eutectic)
heat in ambient at 90 ^{0}C for 2 hours
photo-electrochemical etching to produce Cd/Zn-rich film
KOH solution pH ≥ 12.8
applied voltage 5 – 20 V
etching time 2 – 5 minutes
intensive light source near IR wavelength
cover Cd-rich film and edges with latex organic paste for protection
chemical etching to produce Te-enriched film using PN etchant
Electroless Au or sputtered Au contact on Te-enriched film
CZT PIN device

Figure 4

TOYOTA 2535650

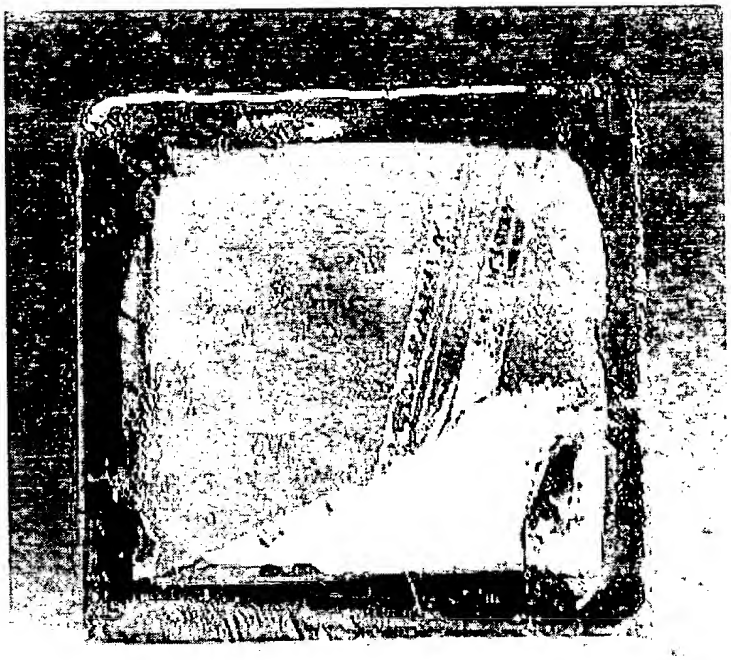

Figure 5

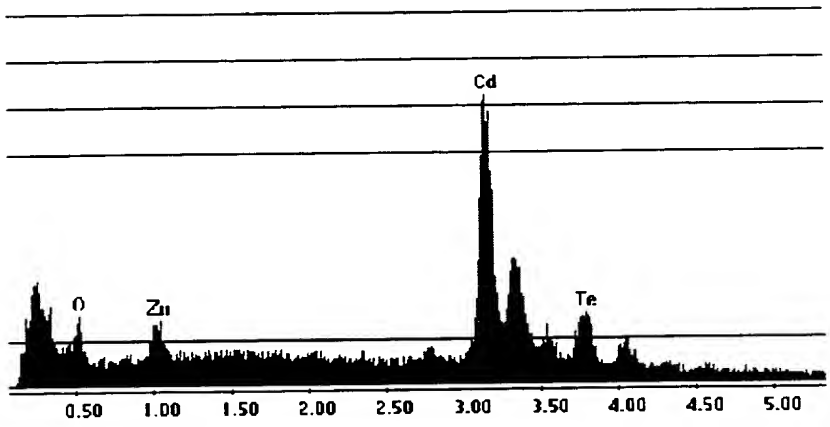

Figure 6a

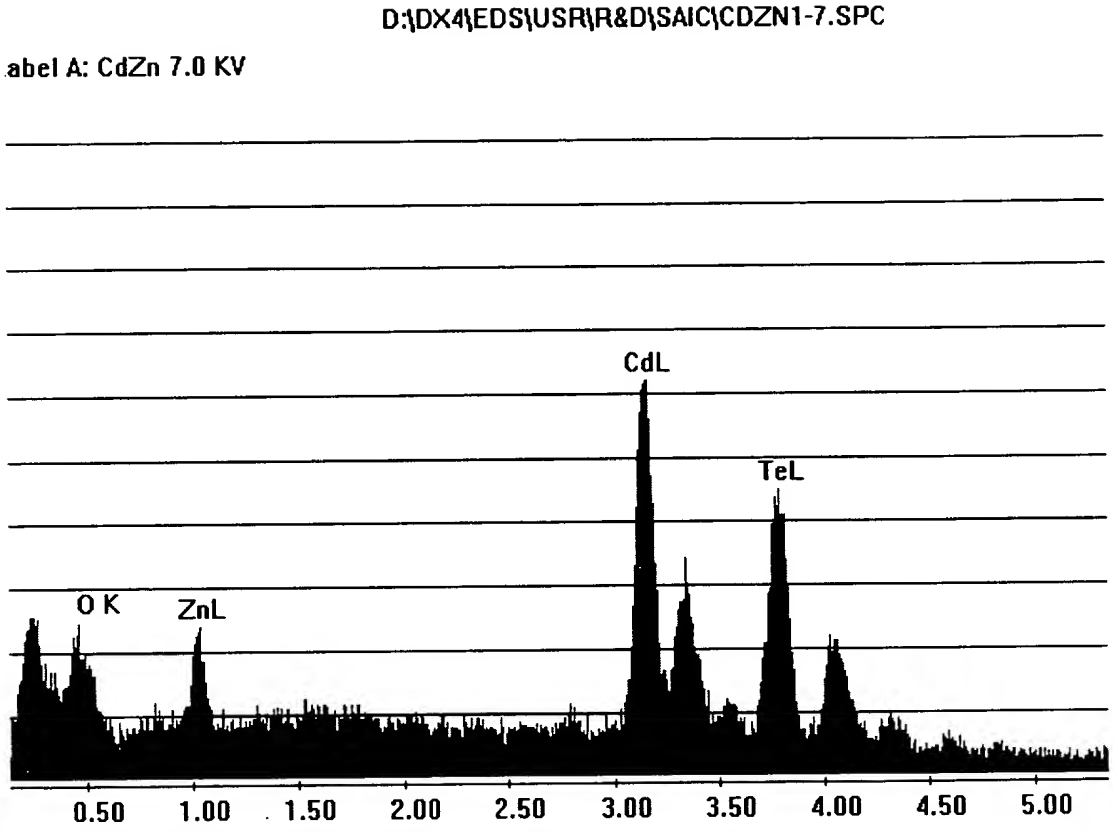
D:\DX4\EDS\USR\R&D\SAIC\CDZN1-7.SPC
abel A: CdZn 7.0 KV
CdL
TeL
O K
ZnL
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00

Figure 6b

TD/0820-2575-2360

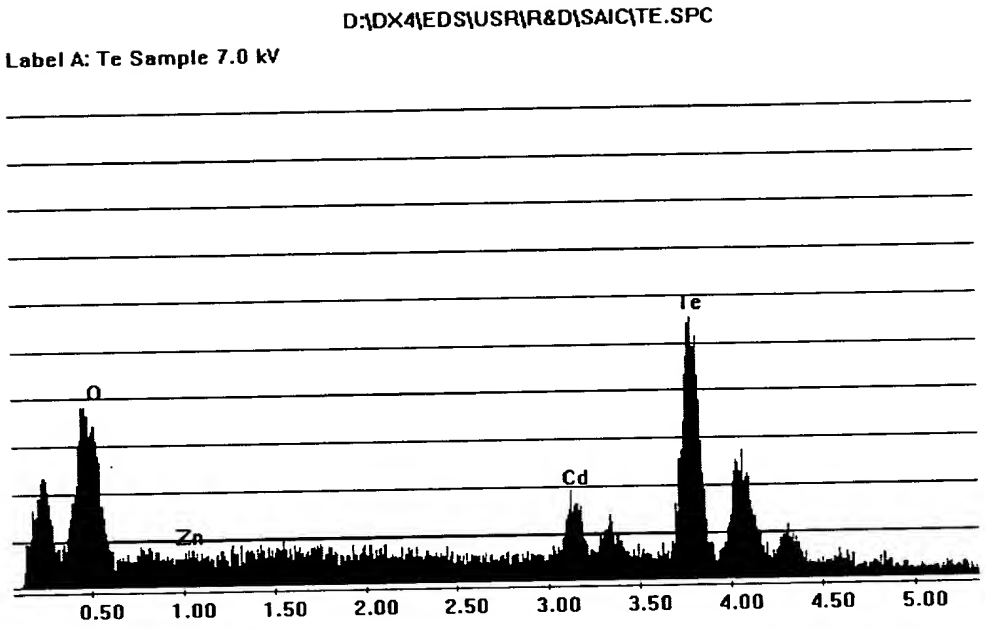

Figure 7

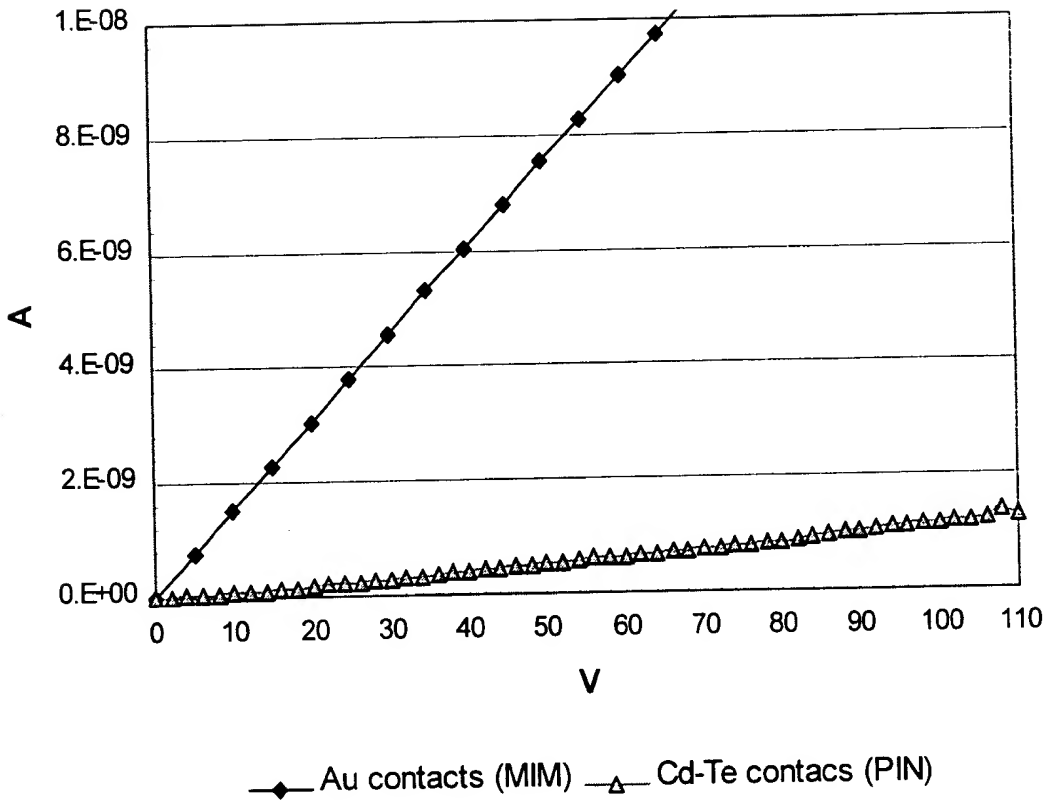
1.E-08
8.E-09
6.E-09
4.E-09
2.E-09
0.E+00
A
0
10
20
30
40
50
60
70
80
90
100
110
V
Au contacts (MIM)
Cd-Te contacs (PIN)

Figure 8

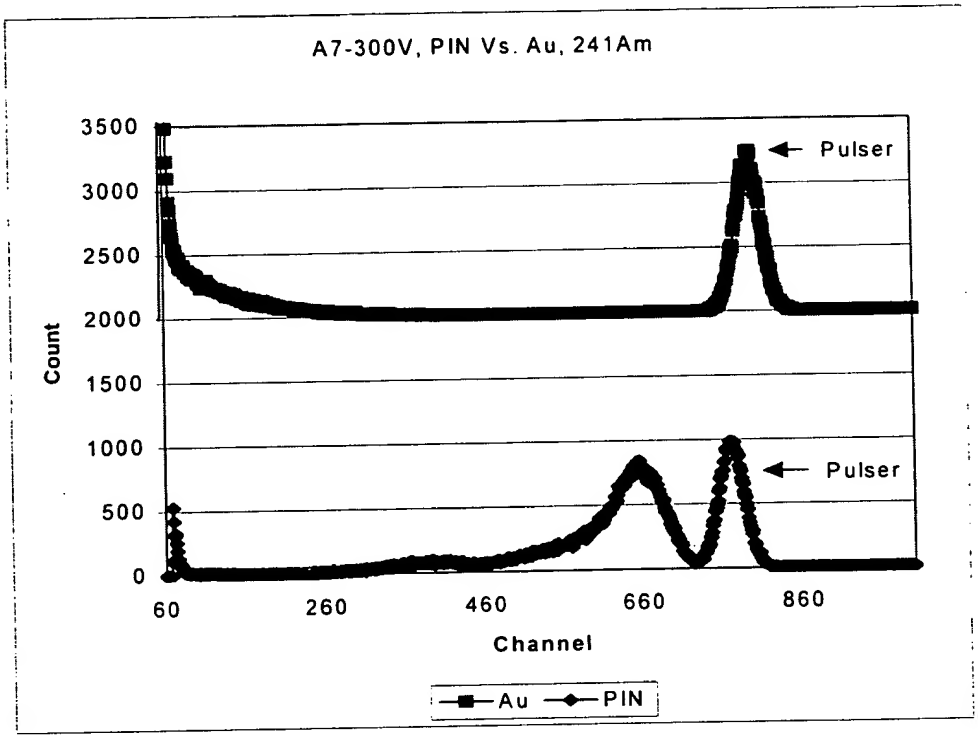
A7-300V, PIN Vs. Au, 241Am
3500
3000
2500
2000
1500
1000
500
0
Count
Pulser
Pulser
60
260
460
660
860
Channel
Au
PIN

Figure 9

10/080,957

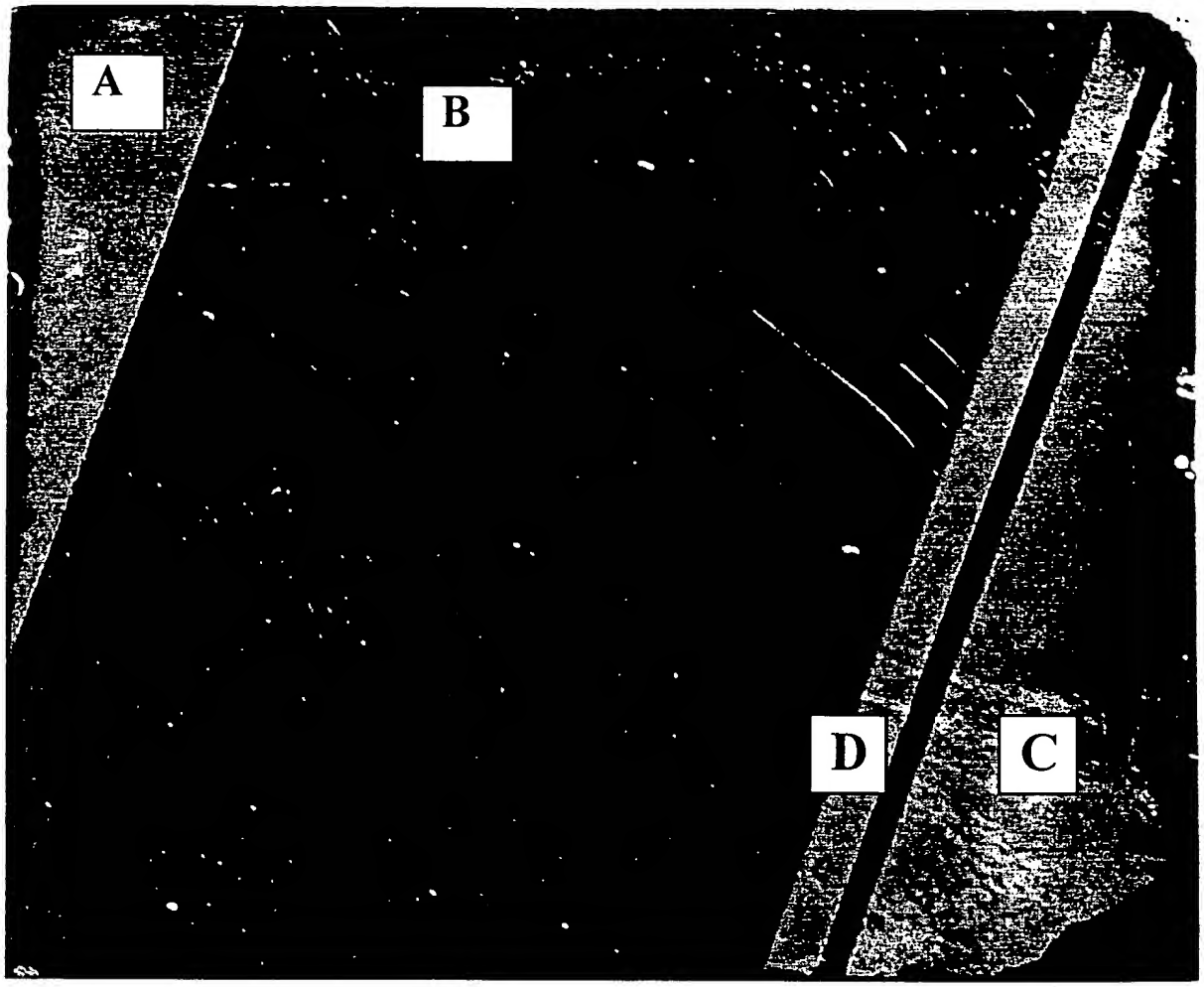

Figure 10